

REMARKS

I. Introduction

With the cancellation herein without prejudice of claim 19, and with the addition of new claims 36 to 40, claims 15 to 18 and 20 to 40 are pending in the present application. In view of the foregoing amendments and the following remarks, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

Applicants note with appreciation the acknowledgment of the claim for foreign priority and the indication that all copies of the certified copies of the priority documents have been received.

Applicants thank the Examiner for considering the previously filed Information Disclosure Statement, PTO-1449 paper and cited references.

II. Rejection of Claims 15, 17 to 19, 21 to 23, 26, and 28 to 30 Under 35

U.S.C. § 102(b)

Claims 15, 17 to 19, 21 to 23, 26, and 28 to 30 were rejected under 35 U.S.C. § 102(b). The Patent Office has contended that these claims are anticipated by U.S. Patent No. 5,509,555 ("Chiang et al."). It is respectfully submitted that Chiang et al. do not anticipate the present claims for at least the following reasons.

Claim 15 is directed to a method for manufacturing a composite component including a porous ceramic blank and a metal melt that infiltrates and fills the blank. Claim 15 has been amended to recite that the blank, infiltrated with the metal melt, is subjected to controlled post-heating to facilitate infiltration. Support for this amendment may be found, for example, on page 3, lines 20 to 26 of the Specification.

Chiang et al. purport to disclose a method for producing an article by reactive infiltration including the steps of providing a preform and a liquid infiltrant alloy that spontaneously infiltrates the preform, and contacting the liquid infiltrant alloy with the preform so that a chemical reaction occurs. The Office Action on page 2, with reference to now-cancelled claim 19, refers to col. 4, lines 12 to 18 of Chiang et al. for disclosing a post-heating operation. While Chiang et al. may refer to heating the reacted preform, nowhere do Chiang et al. disclose, or suggest, post-heating to facilitate infiltration. Instead, in Chiang et al., the heating is done to

remove unreacted liquid infiltrant alloy from the reacted preform surface, not to facilitate infiltration.

Therefore, it is respectfully submitted that Chiang et al. do not disclose, or even suggest, all of the features included in claim 15. Consequently, it is respectfully submitted that Chiang et al. do not anticipate claim 15, or claims 17 to 19, and 21 to 23, which depend from claim 15.

Claim 26, as amended, include subject matter analogous to that of claim 15. It is therefore respectfully submitted that Chiang et al. do not anticipate claim 26 for at least the same reasons set forth above in support of the patentability of claim 15. Consequently, it is respectfully submitted that Chiang et al. do not anticipate claims 28 to 30, which depend from claim 26.

Withdrawal of the present rejection is therefore respectfully requested.

III. Rejection of Claims 16, 20 and 27 Under 35 U.S.C. § 103(a)

Claims 16, 20 and 27 were rejected under 35 U.S.C. § 103(a). The Patent Office has contended that these claims are unpatentable over a combination of Chiang et al. and U.S. Patent No. 6,835,349 ("Pyzik et al."). It is respectfully submitted that the combination of Chiang et al. and Pyzik et al. does not render unpatentable the present claims for at least the following reasons.

Claims 16 and 20 depend from claim 15, and claim 27 depends from claim 26, and therefore incorporate all of the features of claims 15 and 26, respectively. Pyzik et al. does not cure the critical deficiencies set forth above with respect to claims 15 and 26. As such, the combination of Chiang et al. and Pyzik et al. does not disclose or suggest all of the features of claims 16 and 20 which depend from claim 15, and claim 27 which depends from claim 26, and therefore does not render unpatentable these claims.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

IV. Rejection of Claims 24, 25, and 31 Under 35 U.S.C. § 103(a)

Claims 24, 25, and 31 were rejected under 35 U.S.C. § 103(a). The Patent Office has contended that these claims are unpatentable over a combination of Chiang et al. and U.S. Patent No. 6,666,310 ("Berreth et al."). It is respectfully

submitted that the combination of Chiang at al. and Berreth et al. does not render unpatentable the present claims for at least the following reasons.

Claims 24 and 25 depend from claim 15, and claim 31 depends from claim 26, and therefore incorporate all of the features of claims 15 and 26, respectively. Berreth et al. does not cure the critical deficiencies set forth above with respect to claims 15 and 26. As such, the combination of Chiang at al. and Berreth et al. does not disclose or suggest all of the features of claims 24 and 25 which depend from claim 15, and claim 31 which depends from claim 26, and therefore does not render unpatentable these claims.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

V. Rejection of Claims 32 to 35 Under 35 U.S.C. § 103(a)

Claims 32 to 35 were rejected under 35 U.S.C. § 103(a). The Patent Office has contended that these claims are unpatentable over a combination of Chiang at al. and U.S. Patent No. 6,458,466 (“Jones et al.”). It is respectfully submitted that the combination of Chiang at al. and Jones et al. does not render unpatentable the present claims for at least the following reasons..

Claims 32 to 35 depend from claim 26, and therefore incorporate all of the features of claims 26. Jones et al. does not cure the critical deficiencies set forth above with respect to claim 26. As such, the combination of Chiang at al. and Jones et al. does not disclose or suggest all of the features of claims 32 to 35 which depend from claim 26, and therefore does not render unpatentable these claims.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

VI. New Claims 36 to 40

Claims 36 to 40 have been added herein. New independent claims 37 and 39 are patentable over the references relied upon for at least the reason that the references relied upon do not disclose, or suggest, the feature that the metal melt is infiltrated at a temperature that is lower than a melting point of copper. Claim 36 ultimately depends from claim 15, claim 38 ultimately depends from claim 37, and claim 40 ultimately depends from claim 39, and are fully supported by the present application, including the Specification. Accordingly, it is respectfully submitted that

new claims 36 to 40 are patentable over the references relied upon for at least the reasons more fully set forth above.

VII. Conclusion

It is therefore respectfully submitted that all of the presently pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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